Hit List

First Hit Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 9 of 9 returned.

☐ 1. Document ID: US 20050177552 A1

L11: Entry 1 of 9 File: PGPB Aug 11, 2005

PGPUB-DOCUMENT-NUMBER: 20050177552
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050177552 A1

TITLE: Full match (FM) search algorithm implementation for a network processor

PUBLICATION-DATE: August 11, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Bass, Brian Mitchell	Apex	NC	US
Calvignac, Jean Louis	Cary	NC	US
Heddes, Marco C.	Raleigh	NC	US
Maragkos, Antonios	Raleigh	NC	US
Patel, Piyush Chunilal	Cary	NC	US
Siegel, Michael Steven	Raleigh	NC	US
Verplanken, Fabrice Jean	La Gaude		FR

US-CL-CURRENT: 707/3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 20040236720 A1

L11: Entry 2 of 9 File: PGPB Nov 25, 2004

707/6
3
2

PGPUB-DOCUMENT-NUMBER: 20040236720
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040236720 A1

TITLE: Longest prefix match lookup using hash function

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Basso, Claude	Raleigh	NC	US
Calvignac, Jean L.	Raleigh	NC	US
Davis, Gordon T.	Chapel Hill	NC	US

Patel, Piyush C.	Cary	NC	US

US-CL-CURRENT: 707/1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

3. Document ID: US 20040103083 A1

L11: Entry 3 of 9 File: PGPB May 27, 2004

PGPUB-DOCUMENT-NUMBER: 20040103083
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040103083 A1

TITLE: Method and system for optimizing leaf comparisons from a tree search

PUBLICATION-DATE: May 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Gaur, Santosh Prasad	Raleigh	NC	US
Hall, William Eric	Clinton	CT	US

US-CL-CURRENT: 707/3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

4. Document ID: US 20040103081 A1

L11: Entry 4 of 9 File: PGPB May 27, 2004

PGPUB-DOCUMENT-NUMBER: 20040103081
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040103081 A1

TITLE: Method and system for optimizing data searches in tree structures

PUBLICATION-DATE: May 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Gaur, Santosh Prasad	Raleigh	NC	US
Hall, William Eric	Clinton	CT	US

US-CL-CURRENT: 707/2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

5. Document ID: US 20040030714 A1

L11: Entry 5 of 9 File: PGPB Feb 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040030714
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040030714 A1

TITLE: Method of inserting and deleting leaves in tree table structures

PUBLICATION-DATE: February 12, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Basso, Claude	Raleigh	NC	US
Calvignac, Jean L.	Cary	NC	US
Davis, Gordon T.	Chapel Hill	NC	US
Heddes, Marco	Shelton	CT	US
Patel, Piyush C.	Cary	NC	US
Perrin, Steven R.	Raleigh	NC	US
Randall, Grayson W.	Cary	NC	US
Rovner, Sonia K.	Chapel Hill	NC	US

US-CL-CURRENT: 707/102

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

6. Document ID: US 20030009453 A1

L11: Entry 6 of 9 File: PGPB Jan 9, 2003

PGPUB-DOCUMENT-NUMBER: 20030009453
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030009453 A1

TITLE: Method and system for performing a pattern match search for text strings

PUBLICATION-DATE: January 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Basso, Claude	Raleigh	NC	US
Calvignac, Jean Louis	Cary	NC	US
Damon, Philippe	Carrboro	NC	US
Davis, Gordon Taylor	Chapel Hill	NC	US
Heddes, Marco C.	Cary	NC	US
Jeffries, Clark Debs	Durham	NC	US

US-CL-CURRENT: 707/3

7. Document ID: US 7054855 B2

L11: Entry 7 of 9 File: USPT May 30, 2006

US-PAT-NO: 7054855
DOCUMENT-IDENTIFIER: US 7054855 B2

TITLE: Method and system for performing a pattern match search for text strings

DATE-ISSUED: May 30, 2006

PRIOR-PUBLICATION:

DOC-ID	DATE
US 20030009453 A1	January 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Basso; Claude	Raleigh	NC		US
Calvignac; Jean Louis	Cary	NC		US
Damon; Philippe	Carrboro	NC		US
Davis; Gordon Taylor	Chapel Hill	NC		US
Heddes; Marco C.	Cary	NC		US
Jeffries; Clark Debs	Durham	NC		US

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
International Business Machines Corporation	Armonk	NY		US	02

APPL-NO: 09/898253 [PALM]
DATE FILED: July 3, 2001

INT-CL-ISSUED:

TYPE	IPC	DATE	IPC-OLD
IPCP	G06F17/30	20060101	G06F017/30

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPP	G06 F 17/30	20060101

US-CL-ISSUED: 707/3; 707/101, 709/203
US-CL-CURRENT: 707/3; 707/101, 709/203

FIELD-OF-CLASSIFICATION-SEARCH: 707/3, 707/4, 707/101, 709/203
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
5668988	September 1997	Chen et al.	
5794177	August 1998	Carus et al.	704/9
5855020	December 1998	Kirsch	
5864863	January 1999	Burrows	
5897637	April 1999	Guha	707/101
6006264	December 1999	Colby et al.	
6012074	January 2000	Lucas et al.	715/531
6021409	February 2000	Burrows	
6052683	April 2000	Irwin	707/8
6055538	April 2000	Kessenich et al.	
6092100	July 2000	Berstis et al.	
6134553	October 2000	Jacobson et al.	707/10
6266706	July 2001	Brodnik et al.	709/242
6338082	January 2002	Schneider	709/203
6377945	April 2002	Risvik	707/3
6418441	July 2002	Call	707/10
6463440	October 2002	Hind et al.	707/102
6539373	March 2003	Guha	707/102
6564254	May 2003	Shoji et al.	709/217
6594697	July 2003	Praitis et al.	709/225
6654741	November 2003	Cohen et al.	707/6
6675163	January 2004	Bass et al.	707/6
6735670	May 2004	Bronstein et al.	711/108
6760746	July 2004	Schneider	709/203

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
0537894	April 1993	EP	
0752674	January 1997	EP	

OTHER PUBLICATIONS

U.S. Appl. No. 09/543,531, filed Apr. 6, 2000, Brian Mitchell Bass et al. cited by other
U.S. Appl. No. 09/210,222, filed Dec. 10, 1998, Jean Louis Calvignac et al. cited by other
SequeLink.RTM. ODBC Driver Reference for Windows 3.1x, DataDirect, Aug. 1999, XP-002253957, Merant, Mountain View, California. cited by other
Fielding et al., Hypertext Transfer Protocol--HTTP/1.1, Standards Track, Jun. 1999, XP-002196143, The Internet Society. cited by other
Mockapetris, P., Domain Names--Implementation and Specification, XP002917155, Network Working Group. cited by other

ART-UNIT: 2161

PRIMARY-EXAMINER: Ali; Mohammad

ASSISTANT-EXAMINER: Nguyen; Cindy

ATTY-AGENT-FIRM: Cockburn; Joscelyn G. Dillon & Yudell LLP

ABSTRACT:

A method and system for performing a pattern match search for a data string having a plurality of characters separated by delimiters. In accordance with the method of the present invention a search key is constructed by generating a full match search increment comprising the binary representation of a data string element, wherein the data string element comprises all characters between a pair of delimiters. The search key is completed by concatenating a pattern search prefix to the full match search increment, wherein the pattern search prefix is a cumulative pattern search result of each previous full match search increment. A full match search is then performed within a lookup table utilizing the search key. In response to finding a matching pattern within the lookup table, the process returns to constructing a next search key. In response to not finding a matching pattern, the previous full match search result is utilized to process the data string.

16 Claims, 4 Drawing figures

8. Document ID: US 7054315 B2

L11: Entry 8 of 9 File: USPT May 30, 2006

US-PAT-NO: 7054315
DOCUMENT-IDENTIFIER: US 7054315 B2

TITLE: Efficiency masked matching

DATE-ISSUED: May 30, 2006

PRIOR-PUBLICATION:

DOC-ID	DATE
US 20030123459 A1	July 3, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Liao; Heng	Burnaby			CA

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
PMC-Sierra Ltd.	Burnaby			CA	03

APPL-NO: 09/953215 [PALM]
DATE FILED: September 17, 2001

INT-CL-ISSUED:

TYPE	IPC	DATE	IPC-OLD
IPCP	H04L12/28	20060101	H04L012/28

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPP	H04 L 12/28	20060101

US-CL-ISSUED: 370/392; 370/351, 707/3
US-CL-CURRENT: 370/392; 370/351, 707/3

FIELD-OF-CLASSIFICATION-SEARCH: 370/351, 370/389, 370/392, 370/400-401, 707/101-103, 709/238-242
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
5956721	September 1999	Douceur et al.	
5995971	November 1999	Douceur et al.	
6289013	September 2001	Lakshman et al.	370/389
6341130	January 2002	Lakshman et al.	370/389
6560610	May 2003	Eatherton et al.	707/104.1

OTHER PUBLICATIONS

A Search Algorithm for Table Entries with Non-contiguous Wildcarding, downloaded at http://citeseer.ist.psu.edu/tsuchiya91search.html, pp. 1-10, 1991. cited by examiner
"The Art of Computer Programming, vol. 3, Sorting and Searching", pp. 490-499, 1973, Knuth. cited by other
"Packet Classification on Multiple fields", Computer Systems Laboratory, Stanford University, pp. 147-160, Pankaj Gupta et al. cited by other
"High-Speed Policy-based Packet Forwarding Using Efficient Multi-dimensional Range Matching" Laksshman, pp. 203-214. cited by other
"Fast and Scalable Layer Four switching", pp. 191-202, Srinivasan et al. cited by other
"Classifying Packets with Hierarchical Intelligent Cuttings" Stanford University, pp. 34-41, Gupta et al. cited by other

ART-UNIT: 2666

PRIMARY-EXAMINER: Duong; Frank

ATTY-AGENT-FIRM: Behmann; Curtis B. Borden Ladner Gervais LLP

ABSTRACT:

Methods and apparatus for reducing the search space processed by mask matching methods. The search space is reduced by grouping the candidate bit patterns into groups and subgroups that have internal bit agreement between the members. By only applying the mask matching methods to a select number of groups selected by their bit agreement with the target bit pattern, the computation time and memory requirement of the mask matching method is reduced.

5 Claims, 12 Drawing figures

9. Document ID: US 6941292 B2

L11: Entry 9 of 9 File: USPT Sep 6, 2005

US-PAT-NO: 6941292
DOCUMENT-IDENTIFIER: US 6941292 B2

TITLE: Method and system for optimizing data searches in tree structures

DATE-ISSUED: September 6, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gaur; Santosh Prasad	Raleigh	NC		
Hall; William Eric	Clinton	CT		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
International Business Machines Corporation	Armonk	NY			02

APPL-NO: 10/065819 [PALM]
DATE FILED: November 22, 2002

INT-CL-ISSUED: [07] G06 F 17/30

US-CL-ISSUED: 707/2; 707/1, 707/3, 707/4, 707/104.1, 707/102, 707/100
US-CL-CURRENT: 707/2; 707/1, 707/100, 707/102, 707/104.1, 707/3, 707/4

FIELD-OF-CLASSIFICATION-SEARCH: 707/1, 707/2, 707/3, 707/102, 707/100, 707/104.1, 707/101
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3643226	February 1972	Loizides et al.	707/3
4677550	June 1987	Ferguson	707/3
4751684	June 1988	Holt	
5167023	November 1992	de Nicolas et al.	
5172228	December 1992	Israelsen	
5790839	August 1998	Luk et al.	
6654734	November 2003	Mani et al.	707/2
2003/0009474	January 2003	Hyland et al.	707/102
2004/0015494	January 2004	Basso et al.	707/3

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
0520116	December 1992	EP	
WO 0163852	August 2001	WO	

OTHER PUBLICATIONS

IBM Disclosure Bulletin, Shared Folders Efficient Caching Algorithm, Nov. 1991, vol. 34, Issue No. 6, pp. 8-10.
IBM, TDB, vol. 35, No. 7, Dec. 1992, "Task Switching Between Processes Using the Sequencer".
IBM TDB, vol. 35, 1A, Jun. 1992, "Dual-Bus Arbitration for Personal Computer Systems".
Mandl. et al.,Elektrotechnik und Informationstechnik, vol. 115, No. 3, pp. 137-143, 1998, "Real-Time Search-Processor Architectures.".
Yeong, Kang Lai, et al., Proceedings of 1997 IEEE Intl. Symposium on Circuits and Systems. Circuits and Systems in the Information Age. ISCAS '97, (Cat. No. 97CH35987), Pt. vol. 2, pp. 1361-1364, vol. 2, Published: New York, NY, USA, 1997, "An Efficient Array Aarchitecture with Data-Rings for 3-Step Hierarchical Search Block Matching Algorithm."
Kondo, T., et al., IEICE Transactions on Electronics, vol. E76-C, No. 12, pp. 1827-1834, Dec. 1993, "Single-Board SIMD Processors Using Gate-Array LSIs for Parallel Processing.".
Gay, C., Elektronik, vol. 36, No. 12, pp. 94-96, 98, Jun. 12, 1987, T05, West Germany, Memory Supervision with the M68000 Processor. II. "Realisation with the PMMU Component.".

ART-UNIT: 2161

PRIMARY-EXAMINER: Coby; Frantz

ATTY-AGENT-FIRM: Sawyer Law Group LLP

ABSTRACT:

Aspects for optimizing data searches in tree structures are described. The aspects include organizing multiple search levels of data into sub-trees contained in fixed size blocks of shared external memory of an embedded processing system, and requiring each reference to the data to proceed from one-half of a sub-tree during a descent of the search tree based on a search pattern.

17 Claims, 10 Drawing figures

Term	Documents
KEY	888011
KEYS	255079
PATTERN	1667060
PATTERNS	651118

(10 AND (KEY NEAR PATTERN)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	9
(L10 AND (KEY NEAR PATTERN)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	9

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Hit List

First Hit Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 4 of 4 returned.

1. Document ID: US 20050177552 A1

L6: Entry 1 of 4 File: PGPB Aug 11, 2005

PGPUB-DOCUMENT-NUMBER: 20050177552
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050177552 A1

TITLE: Full match (FM) search algorithm implementation for a network processor

PUBLICATION-DATE: August 11, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Bass, Brian Mitchell	Apex	NC	US
Calvignac, Jean Louis	Cary	NC	US
Heddes, Marco C.	Raleigh	NC	US
Maragkos, Antonios	Raleigh	NC	US
Patel, Piyush Chunilal	Cary	NC	US
Siegel, Michael Steven	Raleigh	NC	US
Verplanken, Fabrice Jean	La Gaude		FR

US-CL-CURRENT: 707/3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

2. Document ID: US 20040103083 A1

L6: Entry 2 of 4 File: PGPB May 27, 2004

PGPUB-DOCUMENT-NUMBER: 20040103083
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040103083 A1

TITLE: Method and system for optimizing leaf comparisons from a tree search

PUBLICATION-DATE: May 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Gaur, Santosh Prasad	Raleigh	NC	US
Hall, William Eric	Clinton	CT	US

US-CL-CURRENT: 707/3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

3. Document ID: US 20040030714 A1

L6: Entry 3 of 4 File: PGPB Feb 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040030714
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040030714 A1

TITLE: Method of inserting and deleting leaves in tree table structures

PUBLICATION-DATE: February 12, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Basso, Claude	Raleigh	NC	US
Calvignac, Jean L.	Cary	NC	US
Davis, Gordon T.	Chapel Hill	NC	US
Heddes, Marco	Shelton	CT	US
Patel, Piyush C.	Cary	NC	US
Perrin, Steven R.	Raleigh	NC	US
Randall, Grayson W.	Cary	NC	US
Rovner, Sonia K.	Chapel Hill	NC	US

US-CL-CURRENT: 707/102

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

4. Document ID: US 20040015478 A1

L6: Entry 4 of 4 File: PGPB Jan 22, 2004

PGPUB-DOCUMENT-NUMBER: 20040015478
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040015478 A1

TITLE: Database

PUBLICATION-DATE: January 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Pauly, Duncan Gunther	Wiltshire		GB

US-CL-CURRENT: 707/1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Term	Documents
KEY	888011
KEYS	255079
PATTERN	1667060
PATTERNS	651118
(5 AND (KEY NEAR PATTERN)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4
(L5 AND (KEY NEAR PATTERN)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4

Display Format: - Change Format

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Freeform Search

Database: US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Term: L5 and (key near pattern)

Display: 100 **Documents in Display Format:** - **Starting with Number** 1

Generate: ○ **Hit List** ◉ **Hit Count** ○ **Side by Side** ○ **Image**

Search Clear Interrupt

Search History

DATE: Monday, June 26, 2006 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L11	L10 and (key near pattern)	9	L11
L10	L9 and (leaf)	9	L10
L9	L7 and prefix	9	L9
L8	L7 and prefix near algor$	0	L8
L7	L3 and (key near pattern)	21	L7
L6	L5 and (key near pattern)	4	L6
L5	L4 and (match$ near key)	119	L5
L4	L3 and leaf	1464	L4
L3	L2 and (tree near structure)	3579	L3
L2	707/$.ccls.	35591	L2
L1	optimz$ near leaf	0	L1

END OF SEARCH HISTORY